

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)		
Eric A. Holwitt)	Examiner:	Not Yet Assigned
)		
Application No: Not Yet Assigned)	Art Unit:	Not Yet Assigned
)		
Filed: Not Yet Assigned)		
)		
For: Compositions and Methods of Use of)		
8-Nitroguanine)		
)		

10/008803
11/13/01
10/008803
11/13/01

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, the references listed on the enclosed Form PTO-1449 are submitted for consideration by the Examiner in the examination of the above-identified patent application.

The full consideration of the references in their entirety by the Examiner is respectfully requested and encouraged. Also, it is respectfully requested that the references be entered into the record of the present application and that the Examiner place his or her initials in the appropriate area on the enclosed Form PTO-1449, thereby indicating the Examiner's consideration of each of the references.

The submission of the references listed on the Form PTO-1449 is for the purpose of providing a complete record and is not a concession that the references listed thereon are prior art to the invention claimed in the patent application. The right is expressly reserved to establish an invention date earlier than the above-identified filing date in order to remove any reference submitted herewith as prior art should it be deemed appropriate to do so.

Further, the submission of the references is not to be taken as a concession that any reference represents art that is relevant or analogous to the claimed invention. Accordingly, the right to argue that any reference is not properly within the scope of prior art relevant to an examination of the claims in the above-identified application is also expressly reserved.

The Information Disclosure Statement is being filed:

- ☒ (a) within three months of the filing date of the patent application, (b) within three months of the date of entry into the national stage as set forth in 37 C.F.R. § 1.491 of the international application, or (c) before the mailing date of a first Office Action on the merits.
- ☐ **after** (a), (b), or (c) above, but before the mailing date of a final action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311, and includes:
- ☐ the Certification under 37 C.F.R. § 1.97(e) (see "Certification" below).
- ☐ the fee of \$180 set forth in 37 C.F.R. § 1.17(p) (see "Fees" below).
- ☐ **after** the mailing date of a final action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311, and includes the Certification under 37 C.F.R. § 1.97(e) (see "Certification" below), a Petition requesting consideration of the Information Disclosure Statement (see "Petition" below), and the Petition Fee set forth in 37 C.F.R. § 1.17(i) (see "Fees" below).

Copies Of The References

- ☐ Copies of certain references listed on the enclosed Form PTO-1449 are enclosed herewith. Attached to each reference not in the English language is a concise explanation of the relevance pursuant to 37 C.F.R. § 1.98(a)(3).
- ☐ A copy of the foreign search report is enclosed herewith.
- ☒ All references listed on the enclosed Form PTO-1449 were previously identified in the parent application of the present application, and copies of the references were furnished at that time. Accordingly, additional copies of the references are not submitted herewith, so as not to burden the file with duplicate copies of references. The Examiner is respectfully requested to carefully review the references in accordance with the requirements set out in the Manual of Patent Examining Procedure. In accordance with 37 C.F.R. § 1.98(d), the details of the parent application(s) relied upon for an earlier filing date under 35 U.S.C. § 120 in which copies of the references were previously furnished are set out below:

U.S. APPLICATIONS		Status (<i>check one</i>)		
U.S. APPLICATIONS	U.S. FILING DATE	PATENTED	PENDING	ABANDONED
1. 09/850,646	May 7, 2001		X	
2. 60/203,062	May 9, 2000		X	
3.				

Other Applications

☐ The Examiner's attention is directed to the following U.S. patent application(s):

U.S. APPLICATIONS		Status (<i>check one</i>)		
U.S. APPLICATIONS	U.S. FILING DATE	PATENTED	PENDING	ABANDONED
1.				
2.				
3.				

Fees

- ☒ No fee is owed by the applicant(s).
☐ The **IDS Fee of \$180.00** under 37 C.F.R. § 1.17(p) is enclosed herewith.
☐ The **Petition Fee of \$130.00** set forth in 37 C.F.R. § 1.17(i) is enclosed herewith.

Method Of Payment Of Fees

- ☐ Attached is a check in the amount of \$ 180.00
☐ Charge Deposit Account No. 02-2666 in the amount of \$. (A duplicate copy of this communication is enclosed for that purpose.)

Authorization To Charge Additional Fees

- ☒ If any additional fees are owed in connection with this communication, please charge Deposit Account No. 02-2666. (A duplicate copy of this communication is enclosed for that purpose.)

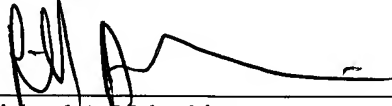
Instructions As To Overpayment

- ☒ Credit Account No. 02-2666.
☐ Refund

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: November 12, 2001


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Substitute for form 1449A/PTO (modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if known	
				Applicati n Number	Not Yet Assigned
				Filing Date	Concurrently Herewith
				First Named Inventor	Eric A. Holwitt
				Group Art Unit	Not yet assigned
				Examiner Name	Not yet assigned
Sheet	2	of	4	Attorney Docket Number	05247P004D

10/008803
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C1	BURNEY et al., "The chemistry of DNA damage from nitric oxide and peroxynitrite", Mutation Res., 424:37-49, 1999	
	C2	BURNEY, S. et al., "DNA damage in deoxynucleosides and oligonucleotides treated with peroxynitrite", Chem. Res., Toxicol., 12:520, 1999	
	C3	BYUN, J. et al., "8-Nitro-2'-deoxyguanosine, a specific marker of oxidation by reactive nitrogen species, is generated by the myeloperoxidase-hydrogen peroxide-nitrate system of activated human phagocytes", Biochemistry, 38:2590-2600, 1999	
	C4	CHWANG, T. Ling et al., "Synthesis of nucleoside nitrates", J. Carbohydrates Nucleosides Nucleotides, 7(6): 405-431, 1980	
	C5	DIPLOCK, et al., "Functional food science and defence against reactive oxidative species", Brit. J. Nutrition 80 (Supp. 1):S77-S112, 1998	
	C6	DOUKI, Thierry et al., "An adduct between peroxynitrite and 2'-deoxyguanosine: 4,5-dihydro-5-hydroxy-4-(nitrosooxy)-2'-deoxyguanosine", Chem. Res. Toxicol., 9:3-7, 1996	
	C7	FUKUYAMA, et al., "Clinical evidence of peroxynitrite formation in chronic renal failure patients with septic shock", Free Radical Biol. & Med. 22:771-774, 1997	
	C8	HOLWITT, Joel, "The effect of peroxynitrite on DNA synthesis of 8-nitroguanine and a physical chemical study", Presented to the Intel International Science and Engineering Fair, May 5, 1999	
	C9	HOLWITT, Gregory, "The synthesis and detection of 8-nitroguanine in DNA", Presented to the Intel International Science and Engineering Fair, May 10, 2000	
	C10	HAUNG, Guang-Fu and TORRENCE, Paul F., "Nitration of pyrimidine bases and nucleotides by nitronium tetrafluoroborate, synthesis of 5-nitro-2'-deoxyuridine", Journal of Organic Chemistry, 42 (24) 3821:3824, 1977	
	C11	HUGHES, "Relationships between nitric oxide, nitroxyl ion, nitrosonium cation and peroxynitrite." Biochim. Biophys. Acta 1411:263-272, 1999	

Examiner Signature	Date Considered
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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				Application Number	Not Yet Assigned
				Filing Date	Concurrently Herewith
				First Named Inventor	Eric A. Holwitt
				Group Art Unit	Not yet assigned
				Examiner Name	Not yet assigned
Sheet	3	of	4	Attorney Docket Number	05247P004D

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C12	HURST AND LYMAR, "Toxicity of peroxynitrite and related reactive nitrogen species towards Escherichia coli", Chem. Res. Toxicol. 10:802-810, 1997	
	C13	JAYASENA, S.D., "Aptamers: An Engineering Class of Molecules That Rival Antibodies in Diagnostics", Clin. Chem. 45:1628-1650, 1999	
	C14	LIN, Weiei et al., "Study on DNA strand breaks induced by sodium nitroprusside, a nitric oxide donor, in vivo and in vitro", Mut. Research, 466:187-195, 2000	
	C15	LOVE, "Oxidative stress in neurological disease", Brain Pathol. 9:119-131, 1999	
	C16	OIKAWA, Shinji and KAWANISHI, Shosuke, "Site specific DNA damage at GGG sequence by oxidative stress may accelerate telomere shortening", FEBS Letters 453:365-368, 1999	
	C17	ROUTLEDGE, Michael N., "Mutations induced by reactive nitrogen oxide species in the supF forward mutation assay", Mutation Research 450, 95-105, 450	
	C18	SCHWEMMER, M., et al. "How urine analysis reflects oxidative stress-nitrotyrosine as a potential marker", Clin. Chim. Acta 297:207-216, 2000	
	C19	SPENCER, J.P.E. et al., "Base modification and Strand Breakage in Isolated Calf Thymus DNA and in DNA from Human Skin Epidermal Keratinocytes Exposed to Peroxynitrite or 3-Morpholinolinosyndnonimine," Chemical Research in Toxicology, 9 (1996), p1 152-1158	
	C20	TRETYAKOVA et al., "Peroxynitrite-induced DNA damage in the supF gene: correlation with the mutational spectrum", Mutation Res. 447:287-303, 2000	
	C21	TUO et al., "Importance of guanine nitration and hydroxylation in DNA in vitro and in vivo", Free Radical Biol. & Med. 29:147-155, 2000	
	C22	YERMILOV, V., et al., "Formation of 8-nitroguanine in DNA treated with peroxynitrite in vitro and its rapid removal from DNA by depurination. "FEBS Letters, 376:207-210, 1995a	

Examiner Signature		Date Considered	
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Substitute for Form 1449A/PTO (Modified) (use as many sheets as necessary) Page 1 of 4		Attorney Docket No. 05247P004D	Application Number: Not Yet Assigned
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) Sheet 1 of 4		First Named Inventor:	Eric A. Holwitt
		Filing Date:	Concurrently Herewith

U.S. PATENT DOCUMENTS						
Exam. Initial*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Code ²	Kind (If known)			
	A1	5,484,707		Goldblum et al.	01/16/1996	
	A2	6,093,723		Miao et al.	07/25/2000	
	A3	6,096,556		Heinecke, Jay W.	08/01/2000	
	A4	6,113,324		Huber, Eduard	09/05/2000	
	A5	6,113,898		Anderson, Darrell R. et al.	09/05/2000	
	A6	6,200,978		Maw et al.	03/13/2001	

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FOREIGN PATENT DOCUMENTS								
Exam. Initial*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM- DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³ Code ⁵	Number ⁴	Kind (If known)				

Examiner Signature		Date Considered	
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				Attorney Docket Number	05247P004D
Sheet	4	of	4		

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